CLAIMS

What is claimed is:

1. A method of determining an efficiency of a repair process for a vehicle in a repair shop, said method comprising the steps of:

creating a vehicle identifier for the vehicle;

examining the identified vehicle to locate areas on the identified vehicle in need of repair;

estimating an extent of a repair for the identified vehicle based on the examination and estimating a total labor hours to perform the repair process based on the extent of the repair;

determining a vehicle production start period based upon when the repair process of the identified vehicle begins and determining a vehicle production finish period based upon when the repair process of the identified vehicle ends;

determining a total shop production hours based upon when the repair shop opened and closed for each day between the vehicle production start period and the vehicle production finish period; and

calculating a production process efficiency for the completed repair process by dividing the total shop production hours by the estimated total labor hours thereby revealing a true efficiency of the repair process by calculating the production process efficiency in terms of hours.

2. A method as set forth in claim 1 wherein the step of determining the total shop production hours is further defined as determining a shop start period equal to the vehicle production start period, and determining a shop finish period equal to the vehicle production finish period.

3. A method as set forth in claim 2 wherein the step of determining the total shop production hours is further defined as determining the number of days between the shop start period and the shop finish period.

4. A method as set forth in claim 3 wherein if the number of days between the shop start period and the shop finish period is equal to one day, then the step of determining the total shop production hours is further defined calculating the number of hours between the shop start period and the shop finish period.

5. A method as set forth in claim 3 wherein if the number of days between the shop start period and the shop finish period is equal to two days, then the step of determining the total shop production hours is further defined as calculating the number of hours between the shop start period and a shop closing time for a first day to define a first day period and calculating the number of hours between a shop opening time for a second day and the shop finish period to define a second day period, and then adding the hours of the first day period to the hours of the second day period.

6. A method as set forth in claim 3 wherein if the number of days between the shop start period and the shop finish period is greater than two days, then the step of determining the total shop production hours is further defined as calculating the number of hours between the shop start period and a shop closing time for a first day to define a first day period, calculating the number of hours between a shop opening time for a last day and the shop finish period to define a last day period, and calculating the number of hours between shop opening and closing times for each day between the first and last day periods to define a middle day period, and then adding together the hours of the first day period, the middle day period, and the last day period.

7. A method as set forth in claim 1 wherein the step of determining the vehicle production start period is further defined as determining a vehicle production start date and a vehicle production start time based upon a date and time that the repair process of the identified vehicle begins.

8. A method as set forth in claim 7 wherein the step of determining the vehicle production finish period is further defined as determining a vehicle production finish

date and a vehicle production finish time based upon a date and time that the repair process of the identified vehicle ends.

9. A method as set forth in claim 8 wherein the step of determining the total shop production hours is further defined as determining the total shop production hours based upon when the shop opened and closed for each day between the vehicle production start date and time and the vehicle production finish date and time.

10. A method as set forth in claim 8 wherein the step of determining the total shop production hours is further defined as determining a shop start date and time equal to the vehicle production start date and time, respectively, and determining a shop finish date and time equal to the vehicle production finish date and time, respectively.

11. A method as set forth in claim 10 wherein the step of determining the total shop production hours is further defined as determining the number of days between the shop start date and the shop finish date.

12. A method as set forth in claim 11 wherein if the number of days between the shop start date and the shop finish date is equal to one day, then the step of determining the total shop production hours is further defined calculating the number of hours between the shop start time and the shop finish time.

13. A method as set forth in claim 11 wherein if the number of days between the shop start date and the shop finish date is equal to two days, then the step of determining the total shop production hours is further defined as calculating the number of hours between the shop start time and a shop closing time for a first day to define a first day period and calculating the number of hours between a shop opening time for a second day and the shop finish time to define a second day period, and then adding the hours of the first day period to the hours of the second day period.

14. A method as set forth in claim 11 wherein if the number of days between the shop start date and the shop finish date is greater than two days, then the step of determining the total shop production hours is further defined as calculating the number of hours between the shop start time and a shop closing time for a first day to define a first day period, calculating the number of hours between a shop opening time for a last day and the shop finish time to define a last day period, and calculating the number of hours between shop opening and closing times for each day between the first and last day periods to define a middle day period, and then adding together the hours of the first day period, the middle day period, and the last day period.

15. A method as set forth in claim 1 wherein the vehicle production start period is further defined as having a vehicle production start date and time, and the vehicle production finish period is further defined as having a vehicle production finish date and time, and further including the step of calculating the days between the vehicle production start date and time and the vehicle production finish date and time to determine a number of days for a total vehicle production.

16. A method as set forth in claim 1 wherein the step of estimating the total labor hours to perform the repair process is further defined as estimating a total labor hours to be sold to perform the repair process.

17. A method as set forth in claim 1 wherein the step of estimating the total labor hours to perform the repair process is further defined as estimating a total metal labor hours plus a total paint labor hours.

18. A method as set forth in claim 1 wherein the repair process of the identified vehicle begins when a predetermined event occurs within the repair shop, and wherein the step of determining a vehicle production start period is further defined as determining a vehicle production start period based upon when the predetermined event occurs.

19. A method as set forth in claim 18 wherein the predetermined event is further defined as a technician being assigned to the identified vehicle, and wherein the step of determining a vehicle production start period is further defined as determining a vehicle production start period based upon when the technician is assigned to the identified vehicle.

20. A method as set forth in claim 1 wherein the repair process of the identified vehicle ends when a predetermined event occurs within the repair shop, and wherein the step of determining a vehicle production finish period is further defined as determining a vehicle production finish period based upon when the predetermined event occurs.

21. A method as set forth in claim 20 wherein the predetermined event is further defined as a technician being unassigned to the identified vehicle, and wherein the step of determining a vehicle production finish period is further defined as determining a vehicle production finish period based upon when the technician is unassigned to the identified vehicle.

22. A method as set forth in claim 1 wherein the steps are repeated for a plurality of identified vehicles each having a separate repair process in the same repair shop.

23. A method as set forth in claim 22 further including the step of calculating an average of the estimated total labor hours for the plurality of identified vehicles in the same repair shop.

24. A method as set forth in claim 23 further including the step of calculating an average of the total shop production hours for the plurality of identified vehicles in the same repair shop.

25. A method as set forth in claim 24 further including the step of calculating an average of the production process efficiency for the repair processes by dividing the average total shop production hours by the average estimated total labor hours.

26. A method as set forth in claim 1 wherein the steps are repeated for a plurality of identified vehicles each having a separate repair process in a plurality of different repair shops.

27. A method as set forth in claim 26 further including the step of calculating an average of the estimated total labor hours for the plurality of identified vehicles in the plurality of different repair shops.

28. A method as set forth in claim 27 further including the step of calculating an average of the total shop production hours for the plurality of identified vehicles in the plurality of different repair shops.

29. A method as set forth in claim 28 further including the step of calculating an average of the production process efficiency for the repair processes by dividing the average total shop production hours by the average estimated total labor hours.

30. A method as set forth in claim 1 further including the step of performing the repair process on the identified vehicle.

31. A method as set forth in claim 30 wherein the step of performing the repair process is further defined as performing at least one of a disassembly step, a frame repair step, a metal repair step, a preparation step, a painting step, a reassembly step, a testing step, and a detailing step.

32. A method as set forth in claim 1 wherein the step of creating a vehicle identifier is further defined as creating a vehicle identifier based upon at least one of a vehicle brand data, a vehicle year data, a customer identifying data, and a repair order data.